INSTITUTE OF ACTUARIAL & QUANTITATIVE STUDIES

Subject: Business economics (micro)

Chapter: Unit-3

Category: Practice Questions

MCQ

1. Subject CT7 April 2011 Question 10

In which situation will a firm cease production in the short run?

A. Total revenue is less than total costs.

B. Total revenue is less than total fixed costs.

C. Average revenue is less than average fixed cost.

D. Average revenue is less than average variable cost.

Answer – D

2. Subject CT7 April 2011 Question 12

Given that a firm's fixed costs are £1,000, the average total cost of its output is £4 and its average variable cost is £3.50, which one of the following will represent its total output per period?

A. 2,000 units.

B. 1,750 units.

C. 250 units.

D. None of the above.

Answer – A

3. Subject CT7 April 2011 Question 13

If firms in a perfectly competitive industry are making a loss in the short run then in the long run firms will:

A. increase their price and increase output.

B. lower their price and increase output.

C. increase their price and lower output.

D. lower their price and lower output.

Answer – A

4. Subject CT7 September 2011 Question 1

What is the combined effect of an increase in the cost of production and a rise in consumer income on the equilibrium price and quantity of a normal good?

A. The effect on price is indeterminate but quantity willfall.

B. The effect on price is indeterminate but quantity will rise.

C. The effect on quantity is indeterminate but price will rise.

D. The effect on quantity is indeterminate but price willfall.

Answer – C

5. Subject CT7 September 2011 Question 6

The managing director of a monopoly firm is given the following data:

Marginal revenue = £9, Marginal cost = £10 Average cost = £11, Average revenue = £15 To maximise profits the firm should:

A. reduce price and increase output.

B. reduce price and reduce output.
C. increase price and increase output.
D. increase price and reduce output.
Answer – D

6. Subject CT7 September 2011 Question 7

Global Airways, which is a profit maximising firm, has to decide whether or not to run an extra daily flight between London and Paris. The total daily fixed costs of the airline are £3,000, the total variable costs of the extra flight are £2,000 and the expected revenue from the extra flight is £2,500. In such circumstances Global Airways will:

A. not run the extra flight as it will expect to lose £2,500 from its profits.
B. not run the extra flight as its expected profit of £500 is insufficient to cover its fixed costs.
C. run the extra flight as it will add £500 to its profits.
D. not run the extra flight as the expected revenue of £2,500 is less than its fixed costs
Answer – C

7. Subject CT7 September 2011 Question 12

Consider the following table:

Units of capital	*Units of labour*	*Output*
10	1	100
10	2	190
10	3	270
10	4	340
10	5	400

The table illustrates which one of the following:

A. economies of scale
B. constant returns to scale
C. diseconomies of scale
D. diminishing marginal productivity
Answer – D

8. Subject CT7 April 2012 Question 15

The range of output over which average variable cost falls will be the same as the range over which:

A. average physical product falls.
B. average physical product rises.
C. marginal physical product falls.
D. marginal physical product rises.
Answer – B

UNIT 3

PRACTICE QUESTION

9. Subject CT7 April 2012 Question 16

What is the combined effect of an increase in the cost of production and a rise in consumer income on the equilibrium price and quantity of an inferior good?

A. The effect on price is indeterminate but quantity will fall.
B. The effect on price is indeterminate but quantity will rise.
C. The effect on quantity is indeterminate but price will fall.
D. The effect on quantity is indeterminate but price will rise.

Answer - A

10. Subject CT7 September 2012 Question 3

Which of the following statements about short run costs of production is incorrect?

A. Marginal cost is equal to average variable cost when average variable cost is at a minimum.
B. Average fixed cost always falls as output rises.
C. Marginal cost cannot exceed average total cost.
D. Average total cost exceeds average variable cost by an amount that declines with increasing output.

Answer – C

11. Subject CT7 April 2013 Question 6

Second degree price differentiation refers to the situation where:

A. a firm charges customers different prices according to how much they purchase.
B. consumers are grouped into independent markets and a separate price is charged in each market.
C. a firm charges each customer the maximum price he/she is prepared to pay.
D. different firms charge different prices for the same product.

Answer - A

12. Subject CT7 April 2013 Question 9

Which of the following is an example of economies of scope?

A. A firm doubles its inputs of capital and labour and its output more than doubles.
B. A firm doubles the number of products it produces and also doubles its research budget.
C. A firm produces a new product and in so doing lowers the average cost of producing its existing products.
D. A firm produces a new product and in so doing lowers the price it charges on its existing products.

Answer - C

13. Subject CT7 April 2014 Question 6

A firm's total costs are £150 when 10 units are produced and the marginal cost of the 10th unit is

£40. The marginal cost of the 11th unit is £15. Which of the following is TRUE?

A. The average cost for 11 units is greater than that for 10 units.
B. The total fixed costs for 11 units are £165.
C. The average fixed cost for 11 units is the same as the marginal cost of the 11th unit.
D. The average fixed cost for 11 units is less than the marginal cost of the 11th unit.

Answer – D

14. Subject CT7 April 2014 Question 11

The profit payoffs to Firm X from combining the various strategies of X (1,2,3,4) and the presumed response of the other firm (S,P,Q,R) in a duopoly industry is given below:

Other Firm's Response

		S	P	Q	R
Strategy of	*1*	90	40	-10	100
Firm X	*2*	40	70	-20	-80
	3	25	50	120	130
	4	10	40	70	60

Which one of the following represents the maximin strategy of Firm X?

A. Strategy 1
B. Strategy 2
C. Strategy 3
D. Strategy 4

Answer - C

15. Subject CT7 April 2014 Question 12

Global Airways, which is a profit maximising firm, has to decide whether or not to run an extra daily flight between London and Edinburgh. The total daily fixed costs of the airline are £4,000, the total variable costs of the extra flight are £5,000 and the expected revenue from the extra flight is £5,500. In such circumstances Global Airways will:

A. not run the extra flight as it will expect to lose £4,500 from its profits.
B. not run the extra flight as its expected profit of £500 is insufficient to cover its fixed costs.
C. run the extra flight as it will add £500 to its profits or reduce losses by £500.
D. run the extra flight as the expected revenue of £5,500 is more than its fixed cost

Answer - C

UNIT 3

PRACTICE QUESTION

16. Subject CT7 September 2014 Question 7

Vertical product differentiation refers to differences between products which reflect:

A. different consumer's tastes but not different quality products.
B. same quality products.
C. different quality products reflected in different production costs.
D. different varieties offered at the same price.

Answer – C

17. Subject CT7 September 2014 Question 8

Diseconomies of scale means:

A. Short run average total cost falls as output rises.
B. Long run average total cost falls as output rises.
C. Long run average total cost rises as output rises.
D. Short run average total cost rises as output rises.

Answer – C

18. Subject CT7 October 2015 Question 7

Vertical product differentiation refers to differences between products which reflect:

A. same quality products.
B. different varieties of the same product offered at the same price.
C. different consumers' tastes but not different quality products.
D. different quality products with different production costs.

Answer – D

19. Subject CT7 October 2015 Question 8

A firm's fixed costs are £1,000 per period, the average total cost of its output is £4 and its average variable cost is £3.50. Which one of the following will represent its total output per period?

A. 250 units
B. 1,750 units
C. 2,000 units
D. None of the above

Answer – C

20. Subject CT7 October 2015 Question 9

Increasing long run average costs are associated with:

A. constant returns to scale.
B. increasing returns to scale.
C. decreasing returns to scale.
D. the law of diminishing returns.

Answer – C

UNIT 3

PRACTICE QUESTION

21. Subject CT7 April 2016 Question 8

Which one of the following reveals constant returns to scale?

A. If more labour is added to a given amount of capital, the marginal product of labour remains unchanged.

B. If the ratio of labour to capital doubles, the output of the firm also doubles.

C. If both the input of capital and labour doubles, output remains constant.

D. If the input of capital and labour doubles, the ratio of output to inputs is unchanged.

Answer – D

22. Subject CT7 April 2016 Question 13

Go Global Airways, which is a profit maximising firm, has to decide whether or not to run an extra daily flight between London and Berlin. The total daily fixed costs of the airline are £6,000, the total variable costs of the extra flight are £3,000 and the expected revenue from the extra flight is £4,500. In such circumstances Go Global Airways which is overall a profitable firm will:

A. not run the extra flight as it will expect to lose £4,500 from its profits.

B. not run the extra flight as its expected profit of £1,500 is insufficient to cover its fixed costs.

C. run the extra flight as it will add £1,500 to its profits.

D. not run the extra flight as the expected revenue of £4,500 is less than its fixed costs

Answer – C

23. Subject CT7 April 2016 Question 4

In the short run, the range of output over which average total cost falls will be the same as the range over which:

A. average physical product falls.

B. average physical product rises.

C. marginal physical product falls.

D. marginal physical product rises

Answer – B

24. Subject CT7 September 2016 Question 7

Vertical product differentiation refers to differences between products which reflect:

A. same quality products.

B. different quality products with different production costs.

C. different consumers' tastes but not different quality products.

D. different varieties of the same product offered at the same price.

Answer – B

25. Subject CT7 September 2016 Question 8

Which of the following reveals constant returns to scale?

A. When the input of both capital and labour doubles, output doubles.

B. When the input of both capital and labour doubles, output remains constant.
C. When the ratio of labour to capital doubles, the output of the firm also doubles.
D. When more labour is added to a given amount of capital, the marginal physical product of labour remains unchanged.

Answer - A

26. Subject CT7 September 2016 Question 9

A firm that produces a main product and a by-product will maximise profits if it:

A. uses cost-based pricing for the main and the by-product.
B. selects the combined output where the combined marginal cost equals the combined marginal revenue.
C. decides on the viability of producing the by-product after it has made the decision to produce the main product.
D. selects the level of output of the by-product where the marginal cost of the by- product equals its marginal revenue.

Answer - B

27. Subject CT7 April 2017 Question 6

Which of the following is an example of economies of scope?

A. firm doubles its inputs of capital and labour and its output more than doubles.
B. firm doubles the number of products it produces and also doubles its research budget.
C. firm produces a new product and in so doing lowers the average cost of producing its existing products.
D. firm produces a new product and in so doing lowers the price it charges on its existing products.

Answer - C

28. Subject CT7 April 2017 Question 7

Increasing long run average costs are associated with:

A. constant returns to scale.
B. decreasing returns to scale.
C. increasing returns to scale.
D. the law of diminishing returns.

Answer - B

29. Subject CT7 April 2017 Question 8

In which situation will a firm cease production in the short run?

A. Total revenue is less than total costs.
B. Total revenue is less than total fixed costs.
C. Average revenue is less than average fixed cost.
D. Average revenue is less than average variable cost.

UNIT 3

PRACTICE QUESTION

Answer - D

30. Subject CT7 April 2017 Question 10

A monopoly firm faces a linear demand schedule and has positive but constant marginal costs which are currently below its marginal revenue. If the firm wishes to maximise profits then it should:

A. lower its price and increase output.
B. raise its price and increase output.
C. lower its price and decrease output.
D. raise its price and decrease output.

Answer - A

31. Subject CT7 October 2017 Question 3

Third degree price discrimination refers to the situation where:

A. a firm charges customers different prices according to how much they purchase.
B. consumers are grouped into independent markets and a separate price is charged in each market.
C. a firm charges each customer the maximum price that he/she is prepared to pay.
D. different firms charge different prices for the same product.

Answer - B

32. Subject CT7 October 2017 Question 8

Which of the following statements about short run costs of production is FALSE?

A. Marginal cost cannot exceed average total cost.
B. Marginal cost is equal to average variable cost when average variable cost is at a minimum.
C. Average fixed cost always falls as output rises.
D. Average total cost exceeds average variable cost by an amount that declines with increasing output.

Answer - A

33. Subject CT7 October 2017 Question 9

A firm that produces a main product and a by-product will maximise profits if it:

A. decides on the viability of producing the by-product after it has made the decision to produce the main product.
B. selects the level of output of the by-product where marginal cost of the by-product equals its marginal revenue.
C. selects the combined output where the combined marginal cost equals the combined marginal revenue.
D. uses cost-based pricing for the main product and the by-product.

Answer - C

34. Subject CT7 April 2018 Question 5

Assuming that the marginal and average cost curves are unchanged then, following a shift in the demand curve to the right, firms in a perfectly competitive industry will:

A. raise their price in the short run but restore the price back to its original level in the long run.
B. keep their price constant in both the short run and the long run.
C. raise their price in both the short run and the long run.
D. keep their price constant in the short run but raise their price in the long run.

Answer – A

35. Subject CT7 September 2018 Question 7

Diseconomies of scale means:

A. short run average total cost falls as output rises.
B. long run average total cost falls as output rises.
C. long run average total cost rises as output rises.
D. short run average total cost rises as output rises.

Answer – C

36. Subject CT7 September 2018 Question 8

The range of output over which average variable cost falls will be the same as the range over which:

A. average physical product falls.
B. average physical product rises.
C. marginal physical product falls.
D. marginal physical product rises.

Answer – B

Longer questions

1. CT7 September 2011 Q29

You are given the following data concerning the production costs and the average revenue of a profit maximising firm that produces Good X. The fixed costs of production are £100.

Output of Good X	*Short Run Average Variable Cost (£s)*	*Average Revenue (£s)*
1	110	300
2	95	250
3	80	210
4	75	180
5	82	150
6	85	120
7	90	100
8	100	90
9	110	80
10	120	70

(i) Calculate the profit maximising output of the firm.

(ii) State the level of output at which average total costs are minimised.

(iii) State what will happen to the production in the short run if the fixed costs of production rise from £100 to £400. (iv) Calculate the smallest rise in total variable costs (to the nearest pound) that would force the firm to cease production in the short run.

2. CT7 April 2012 Q28

A perfectly competitive firm sells Good X at a market price of £18 per unit. The firm's short run total fixed cost is £450 per day and the daily wage rate paid by the firm is £130 per employee. No other costs are involved in production.

The output of the firm varies with the level of employment as follows:

Number of Employees	*Units of output per day*
0	0
1	22
2	42
3	58
4	66
5	67

If the firm employs three workers per day, determine the firm's daily:

(i) Total Revenue.

(ii) Total Cost

(iii) Economic Profit.

3. CT7 September 2012 Q27

A manufacturer of Good X can sell all of Good X produced at the market price of ¥50 per unit.

When the firm is operating efficiently, the total cost of production per day is as follows:

Output per day	*Total Cost (¥)*
0	50
1	60
2	78
3	105
4	140
5	185
6	264

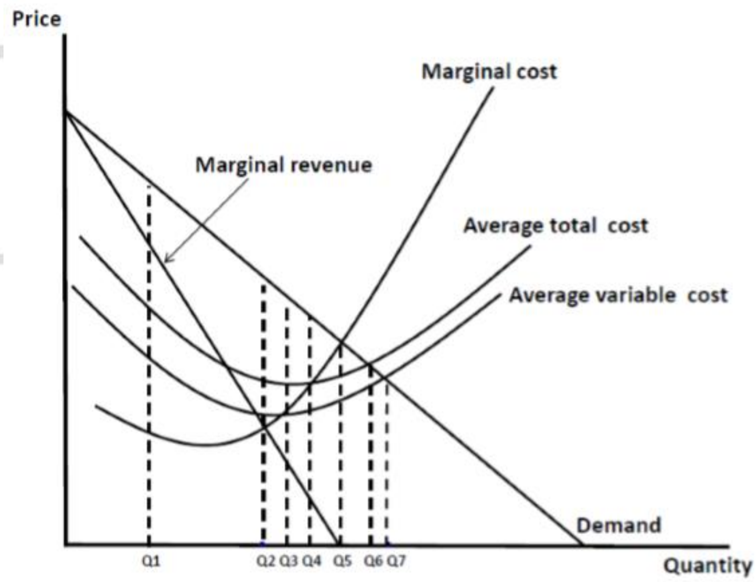
(i) Construct a table which gives marginal cost and average total cost at each level of output.
(ii) State the level of output at which profit will be maximised.
(iii) State the level of maximum profit at the profit maximising output.

4. CT7 September 2012 Q28

Outline the major factors which explain the shape of a firm's average cost curve in the short and the long run.

5. CT7 April 2013 Q30

The diagram below shows a firm's short-run cost and revenue curves.



(i) State at what level of output the total revenues of the firm are maximised.
(ii) State all levels of output where super normal profits are being made.
(v) State all levels of output where the firm would be making an overall loss

6. CT7 September 2013 Q27

The owner of an orchard can choose to grow apples or pears on their land. Apples sell for £200 per tonne. Pears sell for £350 per tonne. The costs of seed, fertiliser, labour and storage costs are £140 per tonne for both goods. Calculate the owner's cost and profit per tonne if the orchard owner decides to grow pears instead of apples on their land.

UNIT 3

PRACTICE QUESTION

7. CT7 September 2013 Q28

Describe how a firm that manufactures cars may experience economies of scale.

8. Subject CT7 April 2014 Question 27

You are given the following data concerning the average product of labour which along with 4 units of capital are the only two factors of production used in the short run production process.

9. CT7 September 2014 Q30

Discuss the types of market structure that would make it difficult for firms to experience economies of scale.

10. CT7 September 2014 Q34

Firm A produces Good X, has fixed costs of £10,000 per year and has a variable cost of £5,000 per year for each worker. Firm A can sell all of Good X produced at a price of £200 per ton. The table below shows the total production of Good X per year as additional workers are employed.

Number of Workers Per Year	*Total Production in Tons per Year*
0	0
1	25
2	75
3	127
4	179
5	212
6	225

(i) Draw a table to illustrate at each level of employment the firm's:
(a) marginal product of labour per year (in tons).
(b) marginal revenue product of labour per year (in £s).
(ii) Calculate the total revenue, total cost and profit/loss per year when four workers are employed.

11. Subject CT7 April 2015 Question 30

(i) Fastrak, a sportswear manufacturing company, has just introduced a new style of sports shoes with a distinctly new design that is expected to become a leader in fashion in the market for trainers.

(ii) Describe how costs, prices and the price elasticity of demand are expected to change over the life cycle of the new product, from its introduction with slow growth in demand, to its peak of popularity and finally its decline.

(iii) In the past few years, Fastrak has experienced a substantial increase in its internet sales compared to its store sales. The manager of Fastrak's main store is confident that internet shopping is unlikely to entirely replace shopping in stores.
Explain the reasons why the manager is correct in his assertion.

UNIT 3

PRACTICE QUESTION

12. Subject CT7 April 2015 Question 32

The information on costs for a firm operating in a perfectly competitive market are provided in the table below. The company charges a price of $14 per unit of its product.

Quantity	*Total Cost ($)*
0	10
1	20
2	26
3	30
4	38
5	50
6	72
7	105

(i) Calculate the average cost and marginal cost of production at each level of output.
(ii) Determine the level of output at which the average and marginal cost of production are equal.
(iii) Determine the profit maximising level of output and the maximum profit.
(iv) Explain why achieving economies of scale is not compatible with perfect competition.

13. Subject CT7 April 2016 Question 28

Consider the following data for a perfectly competitive firm, where the market price for the good is £30:

Output per week	*Total Cost (£'s)*
0	5
1	45
2	78
3	99
4	114
5	132
6	162
7	210

A. Prepare a table showing the marginal cost and average variable cost at each level of output
B. Calculate the profit maximising level of output of the firm.

UNIT 3

PRACTICE QUESTION

C. Calculate the profit at the profit maximising level of output.

14. Subject CT7 April 2016 Question 29

(i) Describe what is meant by industrial clusters.

(ii) Describe why industrial clusters may be desirable within a localised area.

15. Subject CT7 April 2016 Question 30

Consider the following options A to E. Each option relates to an individual firm operating under a certain market structure in the short run.

OPTION	*Marginal cost*	*Average cost*	*Average revenue*	*Marginal revenue*
A	25	20	20	10
B	20	20	20	20
C	24	18	24	24
D	15	18	20	15
E	9	14	20	14

i. State ALL the options that indicate the firm is neither seeking to maximise its profits nor minimise its losses.

ii. State ALL the options that indicate that the firm is making excess profits.

iii. State ALL the options that indicate that the firm could increase its output and increase its profits.

iv. State ALL the options which could correspond to the firm operating in a long run perfectly competitive environment.

16. Subject CT7 September 2016 Question 29

(i) Draw a diagram with a downward sloping demand curve, to show the short run shut down point. Label average cost as AC, average variable cost as AVC and average revenue as A

(ii) Describe the difference between the short run and long run shut down points.

17. Subject CT7 September 2016 Question 32

(i) Describe, with the use of an example, an external benefit of production.

(ii) Draw a diagram to illustrate the external benefits of production.

18. Subject CT7 April 2017 Question 28

Company ABC faces a downward-sloping (straight-line) demand curve as shown in the table below. Its fixed costs of production are zero and the marginal costs of production are £5 per unit produced.

Price per unit (£)	*Quantity Demanded (units)*	*Total Profit (£)*	*Marginal Revenue (£)*
20	0	-	-
18	1	………	………
16	2	………	………
14	3	………	………
12	4	………	………
10	5	………	………
8	6	………	………
6	7	………	………

A. Prepare a table showing the total profit and marginal revenue at each price level.
B. Calculate the price elasticity of demand using the average formula when the price falls from £10 to £8.
C. State over what price range the absolute value of the price elasticity of demand is equal to, or greater than, 1.

19. Subject CT7 April 2018 Question 31

(i) Define the external cost of consumption, including an example.

(ii) Draw a diagram showing the marginal social benefit curve and marginal private benefit curve when a negative externality in consumption exists.

You should show on your diagram, the quantity that would be consumed at the market price P1 by the private sector as Q1 and the socially optimal level of consumption as Q2.

20. CB2 September 2019 Q29

(i) Explain what is meant by a fixed cost and a variable cost giving, for each, an example for a cafe.

(ii) Draw a fully labelled diagram to show the average fixed, average variable and average total cost curves for the cafe. Ensure you also include the marginal cost curve.

(iii) (a) Explain how a cafe may experience diminishing marginal returns.

(b) Show on the diagram from part (ii) the point at which the cafe begins to experience diminishing marginal returns, using the letter A.

21. CB2 April 2020 Q27

Outline, with the use of examples, two different factors of production that an accountancy firm would use.

22. CB2 April 2021 Q28

UNIT 3

PRACTICE QUESTION

Hotel A and Hotel B are profit maximisers with the same weekly fixed costs. During the peak summer season they are both open. However, in the off-peak winter season, Hotel A remains open while Hotel B decides to close even though they both make a loss during the winter season.

(i) Explain the most likely reason why Hotel A remains open and Hotel B closes during the winter season by referring to their possible cost structures.